Amendments to the Specification

Please amend the Specification as follows:

Please amend the section beginning on page 13, line 29 and ending on page 14, line 11 as follows:

[0031] Figure 2: The nucleotide (SEQ ID NO:1) and amino acid (SEQ ID NO:2) sequence of the recombinant βAPP (C-100) polypeptide substrate.

[0032] Figure 3: The nucleotide (SEQ ID NO:3) and amino acid (SEQ ID NO:4) sequence of the recombinant βAPP (C-83) polypeptide substrate.

[0033] Figure 4: The amino acid sequence of beta-secretase cleaved, human βAPP which is recognized and cleaved by gamma-secretase (SEQ ID NO:10).

[0034] Figure 5: The amino acid sequence of S2-cleaved, human Notch-1 which is recognized and cleaved by gamma-secretase (SEQ ID NO:11).

Please amend the section beginning on page 36, lines 1 and ending on page 36, line 11 as follows:

[0093] The present invention provides various nucleic acid molecules having the nucleotide sequences that encode the substrates. The preferred method for generating a substrate uses a nucleic acid molecule that encodes a βAPP substrate comprising the signal peptide from the βAPP pre-protein (Kang, J., et al., 1987 supra) linked in-frame to the N-terminal end of the last 100 amino acid residues of the ~~β~~βAPP protein (Figure IA and 2; SEQ ID NO.:1 and 2). This nucleic acid molecule encodes a βAPP substrate that mimics the C100 C-terminal fragment (CTF).

Please amend the section beginning on page 36, line 29 and ending on page 37, line 23 as follows:

[0096] The term vector includes, but is not limited to, plasmids, cosmids, and phagmids. A preferred vector includes an autonomously replicating vector, comprising a replicon that directs the replication of the vector within the appropriate host cell. The preferred vectors also include an

expression control element, such as a promoter sequence, which enables transcription of the operably linked substrate sequences, and can be used for regulating the expression (e.g., transcription and/or translation) of an operably linked substrate sequence in an appropriate host cell such as ~~E. coli~~ *E. coli*. Prokaryote expression control elements are known in the art and include, but are not limited to, inducible promoters, constitutive promoters, secretion signals, enhancers, transcription terminators, and other transcriptional regulatory elements. Other expression control elements that are involved in translation are known in the art, and include the Shine-Delgarno sequence, and initiation and termination codons. Furthermore, the initiation codon must be in the correct reading frame to ensure transcription of the entire insert. Exogenous transcriptional elements and initiation codons can be of various origins, both natural and synthetic. The efficiency of expression may be enhanced by the inclusion of enhancers appropriate to the cell system in use (Scharf, D. et al., 1994 *Results Probl Cell Differ 20*:125-62; Bittner et al., 1987 *Methods in Enzymol* 153:516-544).

Please amend the section beginning on page 63, line 6 and ending on page 63, line 22 as follows:

[0148] In the most preferred embodiment of the invention, one fluorescent adduct comprises europium cryptate and modifies and antibody specific to the carboxy terminal end of the gamma-cleaved βAPP fragment, i.e. at amino acid residue 711 (corresponding to amino acid 40 in Aβ). One antibody which has binding specificity to an epitope comprising amino acid residue 711 (Aβ amino acid 40) is the 9S3.2 antibody (prepared for Bristol-Myers Squibb Co., Princeton, NJ by Biosolutions, Newark, DE). Correspondingly, the other fluorescent adduct of the most preferred embodiment comprises x1-APC and modifies a second antibody that binds within the amino-terminal region corresponding to amino acid sequence 1-31 of Aβ (see figure 4). An antibody which binds to an epitope corresponding to Aβ amino acid sequence 1-12 is 26D6-B2-B3, which is provided by SIBIA Neurosciences (La Jolla~~LaJolla~~, CA).